

REMARKS

Claim 8 has been replaced by new claim 21 and claims 9 to 11 have been amended, claims 22 and 23 have been added and claims 17 and 18 have been canceled. Claims 9 to 16 and 19 to 23 are now active in this application and claims 1 to 7 stand withdrawn from consideration.

Claims 8 to 20 were rejected under 35 U.S.C. 102(b) as being anticipated by Morozov et al. The rejection is respectfully traversed.

Claim 21, which replaces claim 8, requires, among other features, a flow cell attached to the surface plasmon resonance layer, having a fluid path, the fluid path having an analyte detection chamber disposed along the fluid path, the analyte detection chamber having an interior region in fluidic communication with the surface plasmon resonance layer and having means for generation of a molecular interaction bias across the analyte detection chamber. No such features are taught or even remotely suggested by Morozov et al.

To begin with, it is not apparent from Morozov et al. that the various embodiments therein are combinable in the manner taught by applicant without a prior reading of applicant's disclosure, even assuming arguendo that Morozov teaches the claimed subject matter. Furthermore, as previously and presently claimed, the claim requires that there be a fluid path with an analyte detection chamber as a part of the fluid path and that the analyte detection chamber be in fluidic communication with the surface plasmon resonance layer. Note that Morozov et al. states that "the sample film is deposited on the conducting surface" at column 14, lines 29 and 30. It follows that

Morozov et al. fails to teach the subject matter previously claimed as well as the subject matter presently claimed.

The allegation that applicant's arguments do not comply with 37 C.F.R. 1.111(c) is challenged. The requirements of that Rule have been strictly adhered to. An argument which points to features in the claim and states that the feature or features are not found in the cited reference is as specific an argument as can be presented. This type of response is applicable to rejections under sections 102 and 103 and cannot be more specific as to a rejection under section 102, which is the rejection herein.

Claims 9, 10, 22 and 23 depend from claim 21 and therefore define patentably over Morozov et al. for at least the reasons set forth above with reference to claim 21.

In addition, claim 9 further limits claim 21 by requiring that the molecular interaction bias be electrical. No such combination is taught or suggested by Morozov et al.

Claim 10 further limits claim 21 by requiring that the molecular interaction bias be magnetic. No such combination is taught or suggested by Morozov et al.

New claim 22 further limits claim 21 by requiring that the means for generation of a molecular interaction bias across the analyte detection chamber comprise a first electrode coupled to said surface plasmon resonance layer and a second electrode disposed at a surface of said analyte detection chamber opposed to said first electrode. No such structure is taught or suggested by Morozov et al. either alone or in the combination as claimed.

New claim 23 further limits claim 22 by requiring that the second electrode form a part of path of the analyte detection chamber. No such structure is taught or suggested by Morozov et al. either alone or in the combination as claimed.

Claim 11 requires, among other features, an analyte detection chamber in fluidic communication with the surface plasmon resonance layer having means for generating a molecular interaction bias across the analyte detection chamber to direct bias responsive conjugated molecules to the surface plasmon resonance layer. No such feature is taught or suggested by Morozov et al. either alone or in the combination as claimed as discussed above with reference to claim 21.

Claims 12 and 13 depend from claim 11 and therefore define patentably over Morozov et al. for at least the reasons presented above with reference to claim 11.

In addition, claim 12 further limits claim 11 by requiring that the molecular interaction bias be electrical. No such combination is taught or suggested by Morozov et al.

Claim 13 further limits claim 11 by requiring that the molecular interaction bias be magnetic. No such combination is taught or suggested by Morozov et al.

Claim 14 requires, among other steps, the step placing an analyte detection chamber in fluidic communication with the derivatized surface plasmon layer. No such step is taught or suggested by Morozov et al. as discussed above either alone or in the combination as claimed.

Claim 14 further requires the steps of providing means in the chamber for generating a molecular interaction bias across the chamber. No such step is taught or suggested by Morozov et al. in the combination as claimed.

Claim 14 further requires the steps of providing a conjugate between an analyte and a bias responsive moiety, wherein the analyte is reactive with the derivatized surface plasmon layer and the bias responsive moiety changes the response of the analyte to the molecular interaction bias, introducing the conjugated analyte into the chamber and generating the molecular interaction bias within the chamber. No such combination of steps is taught or suggested by Morozov et al. either alone or in the total combination as claimed. If the examiner persists in the rejection, it is requested that a specific *prima facie showing be made demonstrating how the claim is readable on Morozov et al.*

Claims 15 and 16 depend from claim 14 and therefore define patentably over Morozov et al. for at least the reasons presented above with reference to claim 14.

In addition, claim 15 further limits claim 14 by requiring that the molecular interaction bias be electrical. No such combination is taught or suggested by Morozov et al.

Claim 16 further limits claim 15 by requiring that the molecular interaction bias be magnetic. No such combination is taught or suggested by Morozov et al.

Claim 19 depends from claim 14 and therefore defines patentably over Morozov et al. for at least the reasons presented above with reference to claim 14.

In addition, claim 19 further limits claim 14 by requiring that the conjugated analyte be for the kinetically enhanced measurement of molecular interactions in the groups consisting of: avidin-biotin binding, antibody-antigen binding, antibody-antigen dissociation kinetics, protein binding, protein-nucleic acid binding, specific detection of small molecules, concentration of analytes, measurement of oligonucleotide complements, mixture proportions, receptor-ligand interactions, aptamer interactions, and

molecular assembly events. No such combination is taught or suggested by Morozov et al.

Claim 20 depends from claim 19 and therefore defines patentably over Morozov et al. for at least the reasons presented above with reference to claim 19.

In addition, claim 20 further limits claim 19 by requiring that the conjugated analyte be for the kinetically enhanced measurement of molecular interactions in competitive binding assays. No such combination is taught or suggested by Morozov et al.

It is again noted that the rejection is based upon 35 U.S.C. 102, this requiring that a *prima facie* case of anticipation cannot be made unless each and every feature claimed and the function thereof claimed as well as the claimed interaction of the structure or steps be shown.

In view of the above remarks, favorable reconsideration and allowance are respectfully requested.

Respectfully submitted,



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